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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,052	05/31/2001	Robert S. Matson	1810A-045 (81841.0192)	8141
26021	7590	02/05/2004	EXAMINER	
HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611			LAM, ANN Y	
			ART UNIT	PAPER NUMBER
			1641	

DATE MAILED: 02/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/872,052

Applicant(s)

MATSON ET AL.

Examiner

Ann Y. Lam

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 55-56 and 60-71 are rejected under 35 U.S.C. 102(e) as being anticipated by Milton, 6,110,669.

Milton disclose a plurality of biopolymer and a solid support (see column 3, lines 41-52), wherein the solid support has at least one surface comprising pendant acyl fluoride functionalities (see column 3, lines 41-52), and wherein the biopolymer is attached to the solid support by reaction with the pendant acyl fluoride functionalities (see column 3, lines 25-28.)

As to claim 56, the biopolymers are proteins (see column 12, lines 5-7.)

As to claims 60 and 71, the biopolymers may be the same or different.

As to claim 61, the solid support is of polymeric materials (see column 6, lines 19-20.)

As to claim 62, the solid support is ethylene-acrylic acid copolymer (see column 3, lines 24-28.)

As to claim 63, the solid support is the form of films (see column 2, line 15.)

As to claim 64, the solid support is fabricated from plastic in the form of a planar device having discrete isolated areas in the form of hydrophobic or hydrophilic patches (see column 6, lines 22-26 and lines 32-36.)

As to claim 65, the solid support is a microplate (see column 6, lines 26-36.)

As to claim 66, the plastic is a surface treated with acyl fluoride functionalities (see column 3, line 27, and lines 53-61.)

As to claim 67, the plastic is polypropylene (see column 2, lines 15-18.)

As to claims 68-70, the biopolymers are attached to different, discrete, isolated areas to form an array (see column 6, lines 17-36.)

2. Claims 55-61 and 63-71 are rejected under 35 U.S.C. 102(e) as being anticipated by Obremski et al., 6,110,749.

Obremski et al. disclose a plurality of biopolymer and a solid support (see column 2, lines 63-67), wherein the solid support has at least one surface comprising pendant acyl fluoride functionalities (see column 16, lines 64-67), and wherein the biopolymer is attached to the solid support by reaction with the pendant acyl fluoride functionalities (see column 16, lines 64-67.)

As to claim 56, the biopolymers are nucleic acids (see column 7, lines 39-47.)

As to claims 57 and 58, the biopolymers are polynucleotides (see column 7, lines 39-47.)

As to claim 59, the polynucleotide is single or double stranded DNA (see column 7, lines 39-47.)

As to claims 60 and 71, the biopolymers may be the same or different.

As to claim 61, the solid support is of polymeric materials (see column 16, line 64.)

As to claim 63, the solid support is the form of films (see column 16, line 33.)

As to claim 64, the solid support is fabricated from plastic in the form of a planar device having discrete isolated areas in the form of wells (see column 6, lines 65-66.)

As to claim 65, the solid support is considered a microplate.

As to claim 66, the plastic is a surface treated with acyl fluoride functionalities (see column 16, lines 64-67.)

As to claim 67, the plastic is polypropylene (see column 16, line 64.)

As to claims 68-70, the biopolymers are attached to different, discrete, isolated areas to form an array (see column 2, lines 63-67.)

Response to Arguments

Applicant's arguments filed November 3, 2003 have been fully considered but they are not persuasive.

Applicant argues on page 6 that Milton does not disclose an unmodified biopolymer, but rather Milton discloses a solid support surface that is contacted with "derivatized biopolymer", such as an oligonucleotide biopolymer that is derivatized by

adding an amino group to its 5' end, and thus the biopolymer is modified prior to being attached to the solid support.

As to claims 57-59, the rejection under Milton '669 has been withdrawn.

As to the remaining claims, Examiner asserts that Milton teaches that "any protein or peptide with surface amino groups, e.g. lysine can be immobilized to a solid support having pendant acyl fluoride functionalities..." (see column 12, lines 5-7.) Thus, Milton discloses that a derivatized protein or peptide is not necessary, since any protein or peptide with surface amino groups, e.g. lysine, can be immobilized to a solid support having pendant acyl fluoride functionalities.

Applicant also argues on page 7 that Obremski does not teach an unmodified biopolymer, but rather the biopolymer is modified with a biotin linkage.

In response, Examiner asserts that the biopolymer with the avidin linkage is not considered a modified biopolymer according to Applicant's specification.

Applicant states on page 5 of the application that biopolymers of the present invention may be attached to a solid support without any modification to the biopolymers (see lines 27-28.) Thus, it appears that "unmodified biopolymer" according to Applicant's specification means that the biopolymer is not modified for the purpose of attachment to a solid support.

Obremski teaches that the biopolymer (i.e. "probe" in Obremski) is provided with a biotin linkage in order to bind to a target analyte with an avidin linkage (see column 17, lines 2-6.) That is, the biotin is not disclosed as being necessary for binding to the solid support, but rather to the target analyte.

Moreover, Applicant even states on page 13 of Applicant's specification that the agents (i.e., biopolymer) may be labeled with a reporter molecule such as biotin (see lines 7-8 and 24-27.) Thus, the biotin linkage in the Obremski biopolymer does not make the biopolymer a modified biopolymer according to Applicant's specification.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Y. Lam whose telephone number is (703) 306-5560. The examiner can normally be reached on M-Sat 11-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (703)305-3399. The fax phone number for the organization where this application or proceeding is assigned is (703)308-4242.

Art Unit: 1641

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0196.

A.L. 



CHRISTOPHER L. CHIN
PRIMARY EXAMINER
GROUP ~~1800~~/641